



**Mike DeWine**, Governor  
**Jon Husted**, Lt. Governor  
**Laurie A. Stevenson**, Director

May 17, 2019

Mr. Cory Kiser  
Enon Sand & Gravel, LLC  
P.O. Box 158  
Sabina, Ohio 45169

Re: Enon Sand & Gravel, LLC  
Permit - Short Term  
Application and Support  
NPDES  
Clark County  
11J00141

**Subject: NPDES permit application 11J00141 Supplemental Information**

Dear Mr. Kiser:

Ohio EPA sent a letter dated November 23, 2018 to Enon Sand & Gravel, LLC, which requested additional information related to the NPDES permit application 11J00141. For the Phase 1 area, Ohio EPA requested that a site-specific hydrogeologic investigation be conducted for the two wetlands (Culbertson and Vanderglas Fens) southwest of the proposed Phase 1 mining site and that the investigation include borings and monitoring wells to confirm stratigraphy and to determine water levels and ground water flow direction (including nested wells in unconsolidated and bedrock). The letter also asked whether the proposed pumping/dewatering activity or the removal of overburden or carbonate bedrock from the proposed mining site would impact Mud Run or the unnamed tributaries of Mud Run.

Regarding the Phase 2 area, the letter requested that Enon Sand & Gravel, LLC consider a hydrogeologic evaluation of the Phase 2 area to demonstrate that the northern two wetlands will be protected and consideration be given regarding the potential presence of karst formations at or near the proposed site.

Ohio EPA met with representatives of Enon Sand & Gravel, LLC on February 27, 2019 to discuss in greater detail the supplemental information requested in the November 23, 2018 letter. As a result of those discussions it was understood by Ohio EPA that Enon Sand & Gravel, LLC would provide a work plan for a site specific hydrogeologic investigation related to the potential ground water being contributed from the proposed Phase 1 mining site to the Culbertson Fen, Vanderglas Fen and the proposed receiving stream (unnamed tributary of Mud Run).

Enon Sand & Gravel, LLC submitted the "*Workplan for Hydrogeologic Investigation, Culbertson Fen*" (work plan) to Ohio EPA on April 15, 2019. Ohio EPA has completed a review of the proposed work plan. It appears that the proposed work plan is intended to only address the fen on the Culbertson property. It was noted that borings 19-1 through

19-4 are proposed along Garrison Road adjacent to the proposed Phase 1 mining area. Boring 19-5 is proposed on the Culbertson property just east of the fen. No borings are proposed near the Vanderglas Fen or in the proposed Phase 1 mining area (see figure 1).

It is Ohio EPA's position that additional borings and/or monitoring wells are needed near the area of the Vanderglas Fen. Ohio EPA suggests consideration be given to adding one location along Garrison Road east of 19-4 and two locations on the Vanderglas property, just east of the fen. Ohio EPA also suggests that two locations east of the line of proposed borings on the Phase 1 mining area be added. Suggested locations are depicted in figure 1. These additional locations will not only give an idea of lithology in this complex geologic setting and more certainty near the Vanderglas fen but will provide a wider distribution of monitoring points for water levels and to determine a representative ground water flow direction. Ohio EPA also recommends Enon Sand & Gravel, LLC consider installing one or two borings to the west of the fens. These borings may be useful in gaining a better understanding of ground water flow directions and whether there is a westerly ground water contribution to the fens.

As discussed during the February 27, 2019 meeting, consideration should be given regarding a determination as to whether there is a hydraulic interconnection between the shallow unconsolidated and the deeper bedrock aquifer. It is not clear whether an aquifer test will be conducted in the bedrock to help make this determination. Please clarify if this test will be conducted.

The work plan states that the water level at the Culbertson well will be surveyed. Ohio EPA believes that the other surrounding residential wells should also be surveyed to help develop a more accurate ground water flow map for the bedrock aquifer.

The proposed work plan did not include site-specific hydrogeologic information or stream measurements to show whether the pumping of ground water or the removal of overburden from the mining site will have impacts on Mud Run or the unnamed tributaries. As discussed in our last letter, Ohio EPA is concerned that dewatering of the aquifer and removing potential flow paths in such close proximity to the unnamed tributary may significantly impact the baseflow to the stream. Baseflow for the proposed receiving stream (unnamed tributary of Mud Run) should be determined. Stream gauges should be installed to monitor flows in Mud Run and the unnamed tributary. Piezometers should be installed along the unnamed tributary to help determine gaining/losing conditions (see figure 1 for suggested locations). Ohio EPA also suggests consideration be given to monitoring water chemistry. If baseflow is reduced, this may change the water chemistry.

In the proposed Phase I area, it appears that there may be a drainage swale and/or intermittent streams that may contribute water to the fens (see figure 2). Ohio EPA requests that Enon Sand & Gravel, LLC investigate surface water/ground water interactions in the Phase 1 area which may contribute ground water to the fens.

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Removal of the drainage pathway by mining of the unconsolidated in the Phase I area may impact the amount of water provided to the fens.

The proposed work plan does not include a timeline for the investigation. Please clarify if Enon Sand & Gravel, LLC plans to collect water levels over a long enough time period to assess seasonal variations.

Ohio EPA notes that well installation and construction, well development, etc., should be conducted in accordance with OAC Rules Chapter 3745-9 and Ohio EPA's Technical Guidance for Hydrogeologic Investigations and Ground Water Monitoring.

During the meeting held in February, representatives of Enon Sand and Gravel, LLC. stated that dewatering would not be needed for mining activities that will be conducted in Phase 2; therefore, the NPDES action currently before Ohio EPA is limited to the activities conducted in Phase 1. However, please be advised that storm water discharges associated with construction activity (clearing, grading, excavating, etc.) is required to be authorized by an NPDES permit, if the area in question is greater than 1 acre. To obtain initial coverage, Enon Sand & Gravel, LLC will need to submit a complete and accurate NOI application form, a completed Storm Water Pollution Prevention Plan (SWP3) and the appropriate fee, at least 21 days prior to initiating the construction activity. If Enon Sand & Gravel, LLC determines that dewatering activities or the discharge of process wastewater will be required for the Phase 2 mining area, a separate NPDES permit application will be required to be submitted for the proposed discharge.

Please be advised, Ohio EPA will not be able to proceed with the review of the NPDES permit application 11J00141 without the above listed information.

If you have any questions regarding this matter, please free to contact me by telephone at (937) 285-6107 or via email at [Robert.Ostendorf@epa.ohio.gov](mailto:Robert.Ostendorf@epa.ohio.gov).

Sincerely,



Bob Ostendorf Jr.  
Environmental Specialist 2  
Division of Surface Water

Attachment

ec: Erin Sherer, DSW, CO

BO/tsf

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**Legend**

- |  |                            |  |                            |
|--|----------------------------|--|----------------------------|
|  | OEPA boring/well locations |  | Stream and River Flowlines |
|  | Piezometer locations       |  | Phase II wetlands          |
|  | ESG proposed borings       |  | Phase I wetlands           |
|  | Discharge Location         |  | Approximate Phase 2 Area   |
|  | ODNR Water Wells           |  | Approximate Phase 1 Area   |

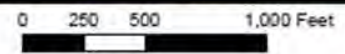


Figure 1. Proposed Locations

May 9, 2019



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**Legend**

 DischargeLocation	 Stream and River Flowlines
 DrainageSwales	 Phase_1_wetlands
 IntermittentStreams	 Approximate Phase_1 Area

Figure 2. Drainage Swales/Intermittent Streams

May 9, 2019